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INNOVATIVE ACTIVITY IN MODERN EDUCATION: PEDAGOGICAL TECHNOLOGIES AND FACTORS OF PROFESSIONAL COMPETENCE

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Abstract

This article explores the content of innovative activities in the modern educational system, the principles of its organization and the theoretical and practical aspects of the application of pedagogical technologies. The study evaluated the professional competence of the teacher as a key factor in the innovative pedagogical process, analyzed the possibilities of developing cognitive activity, independent thinking skills and creativity of students through the integration of innovative technologies into the educational process. Also, the methodological infrastructure, motivational-psychological conditions and professional development strategies of teachers are considered, which are necessary for the effective implementation of innovative activities. The results of the article include scientific and practical recommendations aimed at improving innovative approaches in modern education and improving the quality of the pedagogical process.

Keywords: Innovative activity, pedagogical innovation, educational system, teacher competence, interactive methods, digital education, pedagogical technologies, creativity, quality of Education.

Introduction

The modern educational system is being radically updated in the context of the processes of socio-economic development of society, the development of Science

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and technology and digital transformation. Today, one of the main tasks of education is the formation of a person who meets the requirements of the Times, is an independent thinker, has innovative thinking, is a recipient of a creative approach. In this process, the content of pedagogical activity also takes a fresh look, and the effective integration of innovative approaches to the educational process, advanced pedagogical technologies, interactive methods and digital educational tools has become an urgent issue.

"Education and the transfer of knowledge to the younger generation is one of the main criteria for their preparation for public life and activities. Through education, the moral qualities of young people who fall into the ranks of national values are formed, their attitude to ideological and ideological processes in society is changing, and opportunities arise for the development of a harmonious personality. When determining the social status of an individual, the learning process is important in reforming the socio-political system of society, maintaining social order and stability, and exercising social control"[1, 31].

MAIN PART

Innovative activity relies primarily on the professional competence of the teacher, methodological training, willingness to accept innovation, creative thinking, as well as his desire to improve the educational process. Therefore, the introduction of pedagogical innovations into the educational process is inextricably linked not only with technological, but also with didactic and psychological factors.

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In the formation of innovative activities in the educational system, such tasks as improving the content, methods and forms of the educational process, increasing the activity of the student's personality, strengthening educational motivation, linking knowledge with practice are important. After all, the innovative approach is not just the use of new methods, but aims to increase the effectiveness of education on the basis of new thinking.

Innovative activities – a set of scientific, technological, organizational, financial and commercial activities aimed at commercializing accumulated knowledge, technology and equipment. Innovation can also be defined as the activity of creating, mastering, disseminating and using innovation.

THERE ARE SEVERAL TYPES OF INNOVATION ACTIVITIES:

1. Scientific research and experimental design developments;
2. Create products with new beneficial properties;
3. Technological innovation: obtaining new or efficient production of existing products, items, techniques;
4. Changes in production and quality control dishes, methods and standards necessary for the preparation and organization of production, the production of a new product or the application of a new technological process;
5. Process innovations: design and development of production, new methods of production, new production processes, including plans and drawings, technical specifications, etc;
6. Organizational innovations - improvement of the management system;
7. Technologies implemented - the purchase of machinery and equipment, which, according to its technological purpose, is associated with the introduction of technological and other innovations;
8. Procurement of unrealized technologies in the form of patents, licenses (contracts) for the use of inventions, industrial samples, useful models, disclosure of know-how, as well as services of technological content; procurement of software tools related to the implementation of technological innovations;

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9. Marketing innovations are the implementation of new or significantly improved marketing methods, including significant changes in the design and packaging of products, the sale and presentation of products (services), their presentation and promotion in marketing markets, the application of new methods of forming new pricing strategies.

MATERIALS AND METHODS

"In the process of applying innovations in the education system or the learning environment, the main aim is to achieve the highest possible efficiency from the resources and efforts invested. The key difference between innovation and any ordinary novelty is that innovation must possess a flexible mechanism that enables management and control over the process"[2, 12]. In our country, the central focus of educational reforms is also directed toward improving the quality of education, training specialists who meet the requirements of the modern era, and preparing highly qualified and competitive professionals capable of working effectively in the fields of economy, industry, social sectors, business, science, and international relations.

The most essential elements of modern education have been formed since ancient times. The purpose, content, forms, methods, and means of education are considered traditional categories used to analyze the essence of educational processes. These very categories emerge as the core of the pedagogical activity that organizes the teaching and upbringing process in a particular subject, specialty, or field of study.

By its essence, innovation is considered a dynamic system of introducing novelty into a relationship or process. As a system, innovation reflects, first, the internal logic of the relationship or process in which the novelty is introduced, and second, the consistent development of the introduced innovation over a certain period of time, as well as its reciprocal influence on the surrounding environment.

It is possible to distinguish several stages within the innovation process:

- Studying and identifying the need;
- Creating or selecting the innovation;

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- Planning;
- Preparing for the implementation and piloting the innovation;
- Implementing;
- Analyzing;
- Evaluating.

At each stage of the innovation process, the participants of this process must carry out their activities in the following three directions: material-technical, organizational, and socio-psychological.

"The successful introduction of any innovation, including the implementation of a pedagogical technology and its achievement of the desired effectiveness, depends on how members of the pedagogical community perceive the innovation and their attitude towards it. In order to improve the system of education and upbringing, it is of urgent importance to ensure the effective implementation of new, modern, and innovative pedagogical technologies in this field" [3, 98].

A local innovation serves to describe the practical significance of an innovation introduced for a specific, individual object. A conditional innovation, on the other hand, is used to explain a set of certain elements that ensure the occurrence of complex, progressive renewal within a relationship, object, or process.

In this study, the theoretical foundations of organizing innovative activity in the education system, the content of the pedagogical process, and approaches to developing teacher competencies were examined from a scientific-analytical perspective. During the research, scientific sources, monographs, international experiences, and modern academic publications in the fields of innovative

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pedagogy, didactics, digital education, interactive methods, and pedagogical technologies, as well as normative-legal documents related to the educational policy of the Republic of Uzbekistan, were used as primary materials.

The theoretical and methodological foundation of the research was formed by the following: didactic principles related to the application of innovative approaches in the educational process; the theory of constructivism; the teaching concept based on the interactive model of pedagogical activity; as well as the learner-centered education paradigm. These theoretical approaches aim to enhance learner activity in the educational process, develop independent, inquiry-based, and practice-oriented forms of knowledge acquisition, and strengthen the teacher's role as an organizer and facilitator of learning.

During the research, the way teachers perceive innovation processes and the extent to which pedagogical innovations influence learners' activity and lesson effectiveness were examined. The observations revealed that regular use of activity-based methods, interactive techniques, digital tools, and project-based learning elements in the classroom significantly increases students' engagement in the learning process, stimulates their independent thinking, enhances their social participation, and encourages creative activity.

RESULTS

Innovative activity requires a teacher to direct their psychological, intellectual, and physical efforts toward a specific goal, acquire theoretical knowledge, practical skills, and competencies, and continuously integrate practical experience with theoretical understanding. It also demands the development of cognitive abilities, planning and design skills, communicative competence, and organizational mastery. The principle of periodic repetition and recurrence in pedagogical innovations reflects the restoration and reapplication of innovations under new and more favorable conditions.

The research findings indicate that the effective organization of innovative activity in the education system is directly dependent on the teacher's professional competence, methodological preparedness, and openness to new

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ideas. The studied practices confirm that the regular use of innovative approaches such as digital technologies, interactive methods, creative tasks, and project-based learning enhances student engagement in the educational process, while also developing their skills in independent thinking, analysis, and creative activity. One of the key findings identified through observations and interviews is that teachers who apply innovative methods reported a significant increase in student activity during lessons. In such settings, students participate not merely as passive listeners, but as active seekers, evaluators, and practical users of knowledge. This, in turn, once again confirms the advantages of the constructivist model of teaching.

DISCUSSION

The research results demonstrated that innovative activity in the educational process serves to fundamentally renew the mechanisms of interaction between teachers and learners. From a pedagogical perspective, innovative activity primarily requires the formation of the teacher's professional competence in a new conceptual format, as well as qualitative changes in the methodological, organizational, and communicative aspects of the educational process. This is because in the modern context, the primary value lies not merely in possessing knowledge, but in the ability to apply, analyze, evaluate, and produce practical outcomes from it.

The effectiveness of innovative approaches in the pedagogical process is determined by the teacher's active role in organizing the lesson. The teacher is no longer merely a transmitter of information, but rather functions as a coordinator, facilitator, consultant, and scientific guide within the learning process. In this context, the learner becomes an active central participant in the educational process, while instruction shifts toward a learner-centered format that is based on meaningful communication and interaction.

As identified throughout the study, innovative methods (such as interactive games, project-based learning, problem-based learning, digital platforms, and collegial assessment) serve as significant factors in engaging students in the educational process, stimulating their cognitive interest, and developing creative thinking and

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communicative skills. This is characteristic of the constructivist model of education, in which knowledge is not provided in a ready-made form, but is formed through an active process of inquiry.

However, the analysis of pedagogical practice shows that certain conditions are mandatory for the effective introduction of innovative activities. Including:

- increase the digital and methodological literacy of the teacher,
- deep mastery of psychological approaches to managing student activities,
- Organization of the content of the lesson on the basis of interdisciplinary integration,
- to establish the mechanisms of reflection and analysis in the educational process.

Otherwise, innovative methods are used only as an external form and do not significantly affect the effectiveness of Education. At this point, teaching the student independence as an important pedagogical aspect of innovative activity is of particular importance. The skills of independent thinking and being able to make decisions in a problem situation are one of the main competencies for the future professional development of the student. Innovative activity is valuable precisely because it is aimed at the formation of these skills.

The final analysis showed that the consistent introduction of innovative approaches in the educational system leads to the qualitative improvement of the course process, the intellectual, creative and social development of the student's personality, the rise of the teacher's professional skills and pedagogical culture.

CONCLUSION

In conclusion, the ultimate goal of the pedagogical activity of any teacher is to help students form into a mature personality with creative thinking, which is required in modern society.

The introduction of innovative activities in the educational system is important in improving the effectiveness of the educational process, in the formation of independent and creative thinking skills in students. The results of the study show that classes organized on the basis of interactive methods, digital technologies and an individual-oriented approach increase student activity, create the opportunity to associate knowledge with practice, and ensure the harmonization

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of educational content with modern requirements. At the same time, the effectiveness of innovative activities is determined by the professional competence of the teacher, methodological training and openness to innovation. Therefore, the consistent application of innovative approaches in the educational process is required to be carried out in conjunction with improving teacher skills, enriching methodological resources and modernizing the educational environment.

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